

Article 34

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New Claims:

1. A kit for the combined use for the treatment of cancer patients, which set comprises the following components:

- a) an antigen comprising at least one epitope of a cellular surface protein, or an antibody directed against the cellular surface protein, and
- b) an antigen comprising at least one epitope of an aberrant protein glycosylation, or an antibody directed against the aberrant protein glycosylation.

2. A kit according to claim 1, characterized in that the components a) and b) are contained in one pharmaceutical preparation each or in a single pharmaceutical preparation suitable for immunotherapy.

3. A kit according to claim 2, characterized in that the pharmaceutical preparation is formulated as a vaccine.

4. A kit according to claim 2, characterized in that the pharmaceutical preparation is formulated as an intravenously tolerable product.

5. A kit according to any one of claims 1 to 4, characterized in that the antigen of component a) represents an epitope of a cellular adhesion protein, in particular of a protein selected from the group of EpCAM, NCAM and CEA.

6. A kit according to any one of claims 1 to 4, characterized in that the antigen of component a) is an epitope of a surface receptor, in particular a receptor molecule selected from the group of the EGF receptor family, CD55 receptor, transferrin receptor and P-glycoprotein.

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7. A kit according to any one of claims 1 to 6, characterized in that the antigen of component b) represents an epitope of a carbohydrate selected from the group of Lewis antigens, in particular Lewis y and/or Lewis b, sialyl-Tn and Globo H.

8. A kit according to any one of claims 1 to 7, characterized in that the antigen of component a) represents an epitope of the EpCAM molecule or of the Her-2/neu receptor, and the antigen of component b) represents an epitope of the Lewis Y molecule.

9. The use of a kit according to claim 1 for preparing a diagnostic agent for the immunologic determination of tumor cells of a solid tumor or disseminated tumor cells of a cancer disease.

10. The use according to claim 9, characterized in that the determination is carried out within the scope of the treatment of cancer patients.

11. The use according to claim 9, characterized in that tumor cells from samples of peripheral blood or bone marrow are determined.

12. The use according to claim 9 or 10, characterized in that an antibody titer against the antigens of the components is determined.

13. The use according to claim 12, characterized in that the determination is carried out for monitoring a treatment of a cancer patient.

14. A method for immunologic selection of a tumor-specific target antigen or of antibodies directed against the target antigen by using a kit according to claim 1, characterized in that the antigen is a neoepitope which is formed by the glycosylation

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of an antigen of component a) with an antigen of component b).

15. A preparation of an antigen which comprises a neoepitope or its mimic, obtainable by a method according to claim 14.

16. A preparation according to claim 15 wherein the antigen is a naturally occurring antigen or a fragment thereof.

17. A method according to claim 14, characterized in that an antibody directed against the neoepitope is selected and prepared by using a kit according to claim 1.

18. Preparation of an antibody with specificity for a neo-epitope, obtainable by a method according to claim 17.

19. A diagnostic agent based on a kit according to claim 1, characterized in that it contains a reagent for determining an immune reaction with components a) and b), or with antibodies against these.

20. An agent according to claim 19, characterized in that the reagent is labelled with a fluorescent agent, a chromogen, a radiolabel or an enzyme.

21. An agent according to claim 20, characterized in that the reagent is immobilized on a carrier.

22. An agent according to claim 21, characterized in that the carrier is a matrix for immunoaffinity chromatography.